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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,775	06/19/2001	Joseph Zoeller	70895	2350

7590 04/19/2004  
Mark L. Davis  
P.O. Box 9293  
Gray, TN 37615-9293

EXAMINER

PASTERCZYK, JAMES W

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 04/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/884,775	<b>Applicant(s)</b> ZOELLER ET AL.	
	<b>Examiner</b> J. Pasterczyk	<b>Art Unit</b> 1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

1. This Office action is in response to the amendment filed 3/24/04 and refers to the first Office action mailed 1/26/04.

2. Claims 1-13 and 15-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In all the claims, there appears to be confusion as to the difference between a metal compound, a metal in the zero valent state, and the manner of measuring the percentage of one or the other used in the claimed catalysts, resulting in confusing and possibly incorrect or at least inconsistent terminology in the claims. A metal as the metal is by definition required to be in the zero valence state, preferably known as the zero oxidation state since valence is sometimes used to refer to how many bonds are formed between the metal and other chemical moieties or even the coordination number of the metal. The weight percentages recited in the present claims appear to be of the metal as metal atoms without counting the weight of any ligands on the metal compounds used to provide the metals to the catalyst composition. However, both the tin and platinum are provided as compounds, most of which examples seem to be in the 2+ oxidation state [or valence state, though again this is a less accurate term, particularly given that the platinum is sometimes provided as dichlorodiammine platinum (having a 2+ oxidation state but a four coordinate geometry about the platinum atom) or dihydrogen hexachloroplatinate (having platinum in the 4+ oxidation state, but with the platinum being likely four or six coordinate)]. Yet the examples in the specification show that the support is first treated with a solution of the metal compound, then heated under an inert gas flow. This heating step could result in calcination of the supported metal compound into the metal oxide or elemental metal, but since

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no oxygen or reducing agent appears to be present during this step this change in oxidation state seems unlikely. Applicants are requested to clarify whether or not the metal compounds are indeed calcined in these heating steps. Since the metals are provided as their compounds, and since these compounds may be intact on the support, i.e. still exist as metal compounds instead of the metals or metal oxides, the language of the claims should be clarified to reflect which metal species is actually meant in each of the claims. For example, in claim 1 the last clause should recite that the platinum and tin compounds have a "valency" (sic; oxidation state would be better) greater than zero while the two metals are both provided as distinct compounds, which may or may not remain as those compounds in the supported and heated catalyst. It thus may be better to refer to e.g. the platinum compound as the entity in which form the platinum is supplied to impregnate the support, this platinum compound is then heated along with the support to form some other platinum species having an oxidation state greater than zero, and the weight percentages are of the metal atoms versus the total weight of the solid component of the catalyst. It also may be better to recite these compositions in a product-by-process format since it is likely not actually known what metal species are present on the support after impregnation and heating.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1 and 4-10 are rejected under 35 U.S.C. 102(a) as being anticipated by Zoeller I as cited in and for the reasons of record given in the previous Office action.

5. Claims 1-13 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zoeller I in view of Zoeller II as cited in and for the reasons of record given in the previous Office action.

6. Applicant's arguments filed 3/24/04 have been fully considered but they are not persuasive.

Despite the filing of the terminal disclaimer, the prior art Zoeller references are not overcome since only a properly executed Rule 131 declaration can swear behind a 102(a) or (e) reference. 35 USC 102 reads in part "A person shall be entitled to a patent unless - (a) the invention was . . . described in a printed publication in this . . . country before the invention thereof by the applicants for a patent." Since both Zoeller I and II were printed before the filing date of the present application, they both appear to qualify as 102(a) prior art against the present application. Terminal disclaimers may be used to overcome obviousness type double patenting rejections, but no such rejections are of evidence in the prosecution history of this application.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Pasterczyk whose telephone number is 571-272-1375. The examiner can normally be reached on M-F from 9 to 5:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell, can be reached at 571-272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Mark L. Bell  
Supervisory Patent Examiner  
Technology Center 1700



J. Pasterczyk

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4/15/04